



ATTORNEY DOCKET NO. 21085.0053U5
SERIAL NO.: 10/659,675

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)	
)	
TOWNES et al.)	Art Unit: Unassigned
)	
Application No.: 10/659,675)	Examiner: Unassigned
)	
Filed: September 10, 2003)	Confirmation No. Unassigned
)	
For: TRANSGENIC ANIMALS THAT)	
PRODUCE HUMAN HEMOGLOBIN)	

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

NEEDLE & ROSENBERG, P.C.
Customer No. 23859

October 21, 2003

Sir:

Pursuant to the requirements of 37 C.F.R. § 1.56, submitted herewith on the accompanying Form PTO-1449 is a listing of documents known to Applicants and/or their attorneys. All of the documents cited were cited by or submitted to the Patent Office in Application No. 08/961,443, filed October 30, 1997, to which the present application claims priority. Pursuant to 37 C.F.R. § 1.98(d), copies of these documents are not enclosed.

This Information Disclosure Statement is believed to be filed in a timely manner pursuant to 37 C.F.R. § 1.97(b)(3), in that a first Office Action on the merits of the present patent

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application has not yet been mailed to Applicants.

Consideration of the cited documents and making the same of record in the prosecution of the above-referenced application are respectfully requested.

No fee is believed to be due; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

NEEDLE & ROSENBERG, P.C.

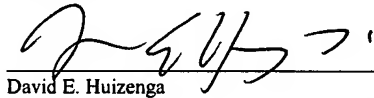


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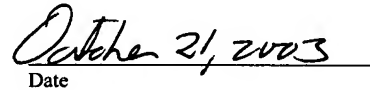
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David E. Huizenga



Date



Form PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF INFORMATION CITED BY APPLICANT (Use as many sheets as necessary)				Complete if Known			
				Application Number		10/659,675	
				Filing Date		September 10, 2003	
				First Named Inventor		Tim Townes et al.	
				Group Art Unit		Unassigned	
Examiner Name		Unassigned					
U.S. PATENT DOCUMENTS							
Examiner's Initials	Cite No.	Document No.	Date	Name	Class	Subclass	Filing Date (if appropriate)
	A1	6,200,806	03-2001	Thomson	435	366	
	A2	5,843,780	12-1998	Thomson	435	363	
	A3	5,602,306	02-11-1997	Townes et al.			
FOREIGN PATENT DOCUMENTS							
Examiner's Initials	Cite No.	Foreign Patent Document Country Code-Number- Kind Code	Date	Name	Translation Yes/No		
	A4	WO 95/03820	9 Feb 1995				
	A5	WO 95/00657	5 Jan 1995				
NON-PATENT DOCUMENTS							
Examiner's Initials	Cite No.	Non-Patent Citations (include Author, Title, Publisher, Relevant Pages, Date and Place of Publication)					
	A6	Baribault et al. "Embryonic Stem Cell Culture and Gene Targeting in Transgenic Mice", Mol. Biol. Med. 6:481-492 (1989).					
	A7	Behringer et al. "Human γ - to β globin gene switching in transgenic mice", Genes & Development 4:380-389 (1990).					
	A8	Behringer et al. "Synthesis of Functional Human Hemoglobin in Transgenic Mice", Science 245:971-973 (1989).					
	A9	Ciavatta et al. "Mouse model of human β^0 thalassemia: Targeted deletion of the mouse $\beta^{\text{mal-}}$ and $\beta^{\text{min-}}$ globin genes in embryonic stem cells", Proc. Natl. Acad. Sci. USA 92:9259-9263 (1995)					
	A10	Dillon N. "Regulating Gene Expression in Gene Therapy", Tibtech 11:167-173 (1993)					
	A11	Ebert et al. Molecular Endocrinology 2:277-283 (1988)					
	A12	Fabry et al. "A Second Generation Transgenic Mouse Model Expressing Both Hemoglobin S(HbS) and HbS-Antilles Results in Increased Phenotypic Severity", Blood 86:2419-2428 (1995)					
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	A14	Greaves et al. "A transgenic mouse model of sickle cell disorder", Nature 343:183-185 (1990)					
	A15	Gu et al. "Independent Control of Immunoglobulin Switch Recombination at Individual Switch Regions Evidenced Trough Cre-LoxP-Mediated Gene Targeting", Cell 73:1155-1164 (1993)					
	A16	Hammer et al. J. Anim. Sci. 63:269-278 (1986)					
Examiner Signature:				Date Considered:			
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							



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	Examiner Name	Unassigned

NON-PATENT DOCUMENTS

Examiner's Initials	Cite No.	Non-Patent Citations (include Author, Title, Publisher, Relevant Pages, Date and Place of Publication)
	A17	Kappel et al., Current Opinion in Biotechnology 3:548-553 (1992)
	A18	Khoury et al. "Parameters Influencing the Expression of Human Hemoglobin in Transgenic Pigs", J. Cell Biochemistry Suppl. 0(17 PartA), B 362, p. 115 (1993)
	A19	Lauer et al. "The Chromosomal Arrangement of Human α -Like Globin Genes: Sequence Homology and α -Globin Gene Deletions", Cell 20:119-130 (1980)
	A20	Logan et al. "Transgenic Swine as a Recombinant Production System for Human Hemoglobin", Methods in Enzymology 231:435-445(1994)
	A21	Moreadith et al. J. of Molecular Medicine 75:208-216 (1997)
	A22	Mullins et al. Journal of Clinical Investigation 98(11):S37-S40 (1996)
	A23	Nagy et al. "Derivation of completely cell culture-derived mice from early-passage embryonic stem cells", Proc. Natl. Acad. Sci. USA 90:8424-8428 (1993)
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	A25	Pennisi et al. "Clones: A hard act to follow", Science 288:1722-1727 (June 2000)
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	A28	Rhoda et al. "Mouse α chains inhibit polymerization of hemoglobin induced by human β^S or $\beta^{S_{Antilles}}$ chains", Biochimica et Biophysica Acta 952:208-212 (1988)
	A29	Rubin et al. Journal of Clinical Investigation 87:639-647 (Feb. 1991)
	A30	Ryan et al. "Human Sickle Hemoglobin in Transgenic Mice" Science 247:566-568 (1990)
	A31	Seamark, Reprod. Fertil. Dev. 6:653-657 (1994)
	A32	Sharpe et al. "Analysis of the Human α Globin Upstream Regulatory Element (HS-40) in Transgenic Mice", European Journal of Molecular Biology 11:4565-4571 (1992)
	A33	Stacy et al. "Use of Double-Replacement Gene Targeting to Replace the Murine α -Lactalbumin Gene with Its Human Counterpart in Embryonic Stem Cells and Mice", Molecular and Cellular Biology 14:1009-1016 (1994)
	A34	Strojek & Wagner Genetic Engineering 10:221-246 (1988)
	A35	Swanson et al. "Production of Functional Human Hemoglobin in Transgenic Swine", BioTechnology 10:557-559 (1992)

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